PONY

سلسلة كتب الأستاذ

ICT

Final Revision

Part 2

By

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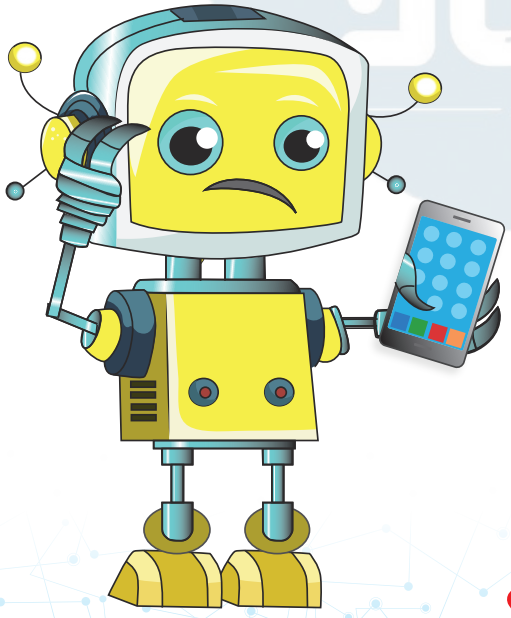

4th Primary

Second Term

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Summary of Unit 4 My Digital Project

Lesson 1

Steps to Solve a Problem:

1. Construct a Hypothesis:

Hypothesis: It is an educated guess about how the problem happened.

2. Test the hypothesis:

Do not try any test that may damage your device.

3. Learning from Mistakes:

If the test does not work, learn from mistakes to make a better hypothesis next time.

Breaking Down Problems:

If the problem is complicated, break down the problem into small sections.

Then, solve each part step by step.

Note: If you are working in a group, give each person one small part to solve.

Lesson 2

Microsoft 365's bundle includes:

1. PowerPoint: It is used to create attractive slides (presentations).
2. Word: It is used for writing text and simple posters.
3. Publisher: It is a professional program used to design posters and flyers.

Note: Your device must be updated to download and run the programs.

Digital Concepts to Consider:

1. Margin: It is the empty space around the edge of a poster or billboard.
   - Don't crowd the edges.
   - Keep a fixed margin of 2.5 cm.
2. Font Type and Size: Choose a font size that is easy to read.
   - Simple fonts are better than complicated fonts.
3. Colors: It's preferable not to add more than three colors.
   - Choose color combinations that match.
   - Take into consideration the color of the background when choosing the font color.
4. Images: Use images that match your content.
   - Use clear, high-quality, and appropriate images.

Lesson 3

Algorithm: It is a set of clear instructions and a series of organized steps to solve a particular problem or do a specific task (such as: Add Two Numbers).

Main Properties of a Good Algorithm:

- Definiteness: Every step should be clear and not confusing.
- Input: It should accept zero or more inputs.
- Output: It should produce at least one output (the solution).
- Finiteness: The algorithm should stop after a limited number of steps.
- Effectiveness: Every step should be able and simple to perform.

Algorithms and Search Engines:

- Every time you type keywords, the search engine uses algorithms to provide the most relevant results.
- If you use a search engine to find directions to a place, the engine will use the database of names and information from digital maps to give you the results.

Lesson 4

Coding: It is the writing of multiple algorithms to make a complete program.

- Algorithms are the base of coding.
- Online animations, movies, and video games are created using coding.
- Computers and applications use algorithms to perform specific tasks.
- Algorithms are the base of coding.
- You can learn coding and create mazes through websites like Code.org.
- Coding teaches you how to think logically to solve problems.
- When you code, you give clear instructions to the computer.

Lesson 5

- There are many applications that use block-based coding.

Scratch	• It is a learning environment that uses a programming language to teach coding for kids and beginners. • It is a block-based interface.
Tynker	• It is a learning environment for kids to learn coding. • It is a block-based interface. • It supports coding languages like Python and JavaScript.
Blockly	• It is an open-source visual programming language. • It is a block-based interface. • It can be integrated with Python and JavaScript.

Exploring Scratch:

- Scratch uses blocks instead of complex codes, where Blocks are Commands.

Script: It is a group of connected blocks that gives instructions to a Sprite.

- **Sprite:** It is the character or object on the screen (the Cat Sprite is the default).
- **Stage Area:** It is the display screen; It's the place where your project appears.
- **Blocks Area:** It is a library that contains all the colored commands.
- **Scripts Area:** It is your workspace; you can drag blocks and assemble them to create commands.
- **Next Costume:** It is a block used to change the sprite's look to make it appear like it is walking (animation).
- **Events category (yellow)** → When green flag clicked
- **From the motion category (blue):** → Move 100 steps
- **Run:** Click the green flag to watch the cat move.

Lesson 6

- **Graphic Art:** It is the creating and editing of digital pictures and drawings.
- **Microsoft Paint:**

It is a popular program to create drawings or edit pictures.
You can open Paint from the Start menu >>>> Accessories.
Using the Menu Bar and Toolbox in Paint, you can use tools for:

1. Cropping: Choose the part of the picture you want and remove the rest.
2. Adding Text: Click on the bottom right corner of the photo.
   Drag your mouse to the right to have enough white space to write.
3. Changing Colors and Size: Fill colors using color options.
   Change the size of the picture or its direction.

- **Microsoft Word:** It offers graphic tools such as Shapes, Icons, 3D Models, and SmartArt.
- **How to find tools:** Go to the Insert tab in the Menu Bar.

Model Exams- Part 2

Model Exam 1

1 Put (✓) or (✗):

1. ICT problems appear to be simple when divided into small parts ( )
2. After completing your research, you should use an outline to organize your notes in a logical manner ( )
3. Margins are the empty space left around the edges of a poster. ( )
4. An algorithm is a set of steps that explains how to do a task. ( )
5. Coding is writing many algorithms to create a complete program. ( )
6. Scratch uses text-based coding like Python. ( )
7. Paint is used to create drawings and edit pictures. ( )
8. The process of selecting certain parts of a picture and cutting the rest is called Cropping. ( )

2 Choose the correct answer:

1. Scientific guess about a problem is called .....
   a. final solution
   b. experiment
   c. hypothesis
   d. problem part
2. What does a search engine use to find the most important results for your search?
   a. Recipes
   b. Typing mistakes
   c. Algorithms
   d. Only images
3. What is the process of writing many algorithms to create a complete program called?
   a. Math
   b. Coding
   c. Cleaning
   d. Planning

4 What is the main system that Scratch uses instead of writing difficult text codes?

a. Complex code system
b. Blocks system
c. Math formulas system
d. Dropdown menu system

5 What is the default sprite (the first character) that appears when opening Scratch?

a. Soccer Ball
b. Wizard
c. Cat Sprite
d. Horse

6 Where can you find graphic tools like shapes and icons in Word?

a. In the view tab
b. In the Start Menu
c. In the File tab
d. In the Insert tab

7 Which block-based coding application supports text-based languages like Python and JavaScript?

a. Tynker
b. Blockly
c. Scratch
d. Both a and b

Model Exam 2

1 Put (✓) or (✗):

1 The teacher helps students organizing and facilitating large tasks and problems ( )

2 Once you find information, you should ask yourself: Is it reliable or not? ( )

3 Publisher is the best tool for designing professional posters. ( )

4 Digital research can include sources other than text. ( )

5 Following a recipe is a type of algorithm. ( )

6 Movies and cartoons are not created using coding. ( )

7 Blocks in Scratch help students code without writing text commands. ( )

8 Word cannot be used to add graphic elements like shapes. ( )

2 Choose the correct answer:

1 When we have a big task at the beginning, how can we make it easier?

a. leave as it
b. divided into small tasks
c. ask another person to solve it at all
d. Distract attention from it

2 What is the name of a set of steps that explains how to do a task?

a. Keyword
b. Digital search
c. Algorithm
d. Database

3 Coding helps us learn an important strategy to solve.....

a. Random puzzles
b. Food recipes
c. Problems
d. Unsolvable mazes

4 .....in Scratch is where you see the result of your project

a. Scripts Area
b. Blocks Area
c. Stage Area
d. Sprite Library

5 Which blocks category contains the block "When Green Flag Clicked," which represents the start block?

a. Looks
b. Control
c. Sound
d. Events

6 Which of the following programs is a popular program for editing pictures and drawings?

a. Publisher
b. Microsoft Paint
c. Google Chrome
d. Excel

7 Selecting certain parts of a picture and cutting the rest is called.....

a. Coloring
b. Cropping
c. Inserting
d. Erasing

Model Exam 3

1 Put (✓) or (✗):

1. You must always try to solve technical problems by yourself without demand help ( )
2. It is not necessary to credit the source in your report ( )
3. It is preferable to use more than five colors in the design to make it attractive ( )
4. There is no need to choose the right keywords when searching; the search engine will always find the results. ( )
5. Algorithms are the base of coding and are instructions given to a computer. ( )
6. You cannot change a sprite's look in Scratch. ( )
7. To add text to a picture in Paint, you must create an enough space to write the text. ( )
8. Popular programs for editing pictures and drawings exist only on mobile phones. ( )
9. You can fill colors using the color options in Paint. ( )

2 Choose the correct answer:

1. Reliable sources must be written in ..... way
   a. slang and contains errors
   b. professional, careful, and free of error
   c. not official
   d. not clear
2. You should .....to tell the search engine what you want to find?
   a. turn off the computer
   b. enter the keywords
   c. clean your room
   d. prepare a meal

3 Which website can help you learn coding?

a. Facebook
b. Code.org
c. Google Maps
d. Microsoft Word

4 What is the term for a group of connected blocks that give commands to a sprite?

a. Sprite
b. Block
c. Script
d. Command

5 Which of these applications is an open-source visual programming language and can be integrated with other languages like Python?

a. Movie Maker
b. Blockly
c. Daisy the Dinosaur
d. Paint

6 You should drag..... to the right when adding text to a picture in Paint?

a. Close button
b. Mouse pointer
c. Menu Bar
d. The whole picture

Model Exam 4

1 Put (✓) or (✗):

1 If you have group that helps you to solve problems, each person should solve a small part of the problem ( )

2 You can ask your parents or teacher about the reliable sources for your research ( )

3 Word processing software (Word) can be used to design posters. ( )

4 The image on the poster should be unclear to encourage the viewer to focus on the text. ( )

5 When you enter unclear keywords, the search engine's algorithm is very accurate in all cases. ( )

6 Code.org is an example of websites that help you learn coding.( )

7 The block "Wait 1 second" is in the Motion category. ( )

8 You can change the size or direction of a picture using Paint. ( )

9 You can access graphic design tools in Word from the Insert tab. ( )

2 Choose the correct answer:

1 What is the best tool for designing a digital poster or billboard .....

a. Paint
b. Excel
c. Publisher
d. mobile app

2 A recipe to make a meal is an example of .....

a. A complex problem
b. A type of algorithm
c. A random result
d. A disorganized process

3 What does the term "Coding" mean?

a. Reading
b. Handwriting
c. Programming
d. Catering

4 The first step to solve a problem is to ..... .

a. construct a hypothesis
b. test the hypothesis
c. choose your topic
d. None of them

5 Paint is included as a part of..... in the Start menu.

a. Internet browsers
b. Video games
c. Accessories
d. Search engines

6 Word can help design graphic elements like.....

a. Email
b. Map databases
c. Shapes and charts
d. Video calls

Model Exam 5

1 Put (✓) or (✗):

1 A hypothesis is a scientific guess about how things happen, and it can be tested. ( )

2 You do not need to take steps to solve technical issues, the solution comes automatically ( )

3 Printing the report is the first step before digital research ( )

4 We do not need to consider the background color when choosing the font color. ( )

5 Search engines use a map database to give you directions to a place. ( )

6 Coding does not help us think logically to solve problems. ( )

7 The Blocks Area contains all the available commands. ( )

8 When you open Paint, you will find the available tools in the Menu Bar and Toolbox. ( )

9 Algorithms are the main tools in Paint. ( )

2 Choose the correct answer:

1 Word processing software is a part of ..... package.

a. Google Drive
b. Microsoft 365
c. Adobe Suite
d. Vlaby

2 Computers and their applications use algorithms to.....

a. Decorate the room
b. Perform specific tasks
c. Cook food
d. Send spam messages

3 You can give the program ..... to solve a maze.

a. Your personal notes
b. Pictures from the internet
c. Instructions on how to solve it
d. Food recipes

4 In which category of blocks can you find the block "Move 10 Steps"?

a. Events (yellow)
b. Motion (blue)
c. Looks (purple)
d. Sound (pink)

5 ..... means that the algorithm should stop after a limited number of steps.

a. Effectiveness
b. Finiteness
c. Definiteness
d. Input

6 Hamza wants to create a cartoon movie. He should learn .....

a. Math
b. coding
c. Music
d. None of them

Answers

Model Exam 1

1 1 ✓ 2 ✓ 3 ✓ 4 ✓
5 ✓ 6 ✗ 7 ✓ 8 ✓

2 1 c 2 c 3 b 4 b
5 c 6 d 7 d

Model Exam 2

1 1 ✓ 2 ✓ 3 ✓ 4 ✓
5 ✓ 6 ✗ 7 ✓ 8 ✗

2 1 b 2 c 3 c 4 c
5 d 6 b 7 b

Model Exam 3

1 1 ✗ 2 ✗ 3 ✗ 4 ✗
5 ✓ 6 ✗ 7 ✓ 8 ✗
9 ✓

2 1 b 2 b 3 b 4 c
5 b 6 b

Model Exam 4

1 1 ✓ 2 ✓ 3 ✓ 4 ✗
5 ✗ 6 ✓ 7 ✗ 8 ✓
9 ✓

2 1 c 2 b 3 c 4 a
5 c 6 c

Model Exam 5

1 1 ✓ 2 ✗ 3 ✗ 4 ✗
5 ✓ 6 ✗ 7 ✓ 8 ✓
9 ✗

2 1 b 2 b 3 c 4 b
5 b 6 b